REMARKS

This paper is being presented in response to the non-final Office Action dated May 11, 2005, wherein (i) claims 1, 11, 15, 16, 20, and 31-38 have been rejected under 35 U.S.C. §102(e) as being anticipated by Nixon et al. U.S. Patent Publication No. 2004/0078182 A1 ("Nixon"), and (ii) claims 14, 21, 23, 24, 40 and 45 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Nixon in view of one of Hafemann et al. U.S. Patent No. 6,161,051 ("Hafemann"), Berman et al. U.S. Patent RE No. 30,280 ("Berman"), and Santoline U.S. Patent No. 5,826,060 ("Santoline"). Reconsideration and withdrawal of the rejections of claims 1, 11, 14-16, 20, 21, 23, 24, 31-38, 40, and 45 are respectfully requested in view of the following remarks.

I. Status of Claims

Claims 1-45 are pending and at issue in the present application. As noted above, claims 1, 11, 14-16, 20, 21, 23, 24, 31-38, 40, and 45 stand rejected. Claims 2-10, 12, 13, 17-19, 25-30, 39, and 41-44 have been indicated as allowable in substance, the acknowledgement of which Applicants are appreciative.

Dependent claim 22 was noted on the Office Action Summary sheet as rejected, although Applicants have been unable to locate a basis for the rejection set forth in the Detailed Action portion of the Office Action. Accordingly, Applicants respectfully request a basis for the rejection of claim 22.

II. Amendments to the Specification

By the foregoing amendments, paragraph [0083] of the specification has been amended to add to the description a reference to elements shown in FIG. 4 and identified as element 120. More specifically, the foregoing amendment to the specification identifies the subject elements shown in FIG. 4 as piping connection elements 120.

Support for the foregoing amendment to the specification is based on the description set forth in paragraph [0083] and FIG. 4 of the application as originally filed. The elements 120 appear in FIG. 4 in a manner similar to elements 104 and 114, which are described in paragraph [0083] as piping connection elements. It is accordingly submitted that no new matter has been added by the foregoing amendment to the specification, inasmuch as the amendment merely sets forth a textual description of subject matter clearly shown in FIG. 4 of the application as filed.

For the foregoing reasons, it is submitted that the replacement paragraph set forth herein above addresses the objection to FIG. 4 under 37 C.F.R. §1.84(p)(5).

III. Amendments to the Drawings

The drawings have also been objected to under 37 C.F.R. §1.84(p)(5) for failure to include references to two elements, namely pump 184 and valve 186, described in the specification in connection with FIG. 7B. It is respectfully submitted that the attached replacement sheet presents changes to FIG. 7B to include the previously omitted elements and, therefore, addresses this objection to the drawings. More specifically, with the changes, FIG. 7B now includes reference numerals and lead lines identifying the aforementioned elements. An Annotated Sheet to show these changes is also submitted herewith for the convenience of the Examiner.

IV. The 35 U.S.C. §102(e) Rejections Are Traversed

Claims 1, 11, 15, 16, 20, and 31-38 have been rejected under 35 U.S.C. §102(e) as being anticipated by Nixon. Applicants respectfully traverse these rejections, and the assertions and determinations therein, for at least the following reasons. Applicants respectfully request reconsideration and withdrawal of these rejections.

Independent claim 1 and, by implication, claims 11, 15, 16, 20, and 31-38 dependent thereon, recite in pertinent part a process control system element comprising a control module and a process simulation module adapted to simulate the operation of one or more physical devices within the process plant being controlled by the control module. Claim 1 further requires that the process simulation module is communicatively connected to the control module to communicate data between the process simulation module and the control module during operation of the control module. However, Nixon fails to disclose or suggest a process simulation module, as recited in claim 1, for the reasons set forth below.

Nixon fails to disclose or suggest a process simulation module, as recited in claim 1, for at least three reasons highlighted by the following underscored claim language. First, Nixon fails to disclose or suggest a process simulation module <u>communicatively connected</u> to a control module. The Nixon disclosure is also deficient due to the absence of a process simulation module adapted to <u>simulate the operation of one or more physical devices being controlled by the control module</u>. Still further, Nixon fails to disclose or suggest a process simulation module communicatively connected to a control module <u>to communicate data during operation of the control module</u>.

In contrast, Nixon discloses a simulation application for simulating the operation of process control modules. Each deficiency noted above follows from this fundamental distinction.

A. The Nixon Simulation Lacks a Communicative Connection to a Control Module

Nixon teaches a simulation application that uses copies of control modules, rather a process simulation module communicatively connected to a control module, as recited in claim 1. Once copied, the control modules have no further involvement in the simulation.

More specifically, the Nixon simulation application includes a routine that creates simulation instances by copying each control module in a node of the process control system specified to be simulated. See, for example, paragraphs [0028] and [0029], as well as paragraph [0034], which states that "the create simulation routine 57 ... copies (or creates) a simulation block for each of the blocks and modules residing in each of the specified nodes." Next, the copies are converted into a simulation module by specifying that a simulation input be used for input blocks. See, e.g., paragraph [0034].

In operation, the inputs and outputs may be tied to a standard simulation interface, such as a HYSYS interface, or another interface that allows an operator to change the inputs and outputs for the simulation. See, e.g., paragraph [0045]. These interfaces constitute the communicative connections to the simulation modules taught by Nixon. Nixon therefore fails to disclose or suggest any other communicative connections to the simulation modules, much less a communicative connection to a control module, or that it would even be desirable to have such communication.

The Office Action refers to the above-noted routine 57 of the simulation application as disclosing the recited communicative connection. It is respectfully submitted, however, that the act of copying a control module does not constitute a communicative connection. The original module and its copy created by the routine 57 are not connected in any sense, much less a communicative sense.

B. Nixon Does Not Simulate Physical Devices Controlled by a Control Module

Claim 1 requires that the process simulation module simulate the operation of one or more physical devices being controlled by the control module. In short, Nixon is directed to simulating something else. Instead of simulating the physical devices controlled by a control

module, Nixon's simulation modules simulate the operation of the control modules themselves.

Contrary to the position taken in the Office Action, it is respectfully submitted that the nodes of Nixon's process control system are not physical devices. Each of these nodes is a process control entity consisting of one or more control modules. Because control modules cannot be considered physical devices, it follows that the nodes disclosed by Nixon also fail to constitute physical devices.

Even if process control entities like nodes may be considered physical devices, a node of the process control system disclosed by Nixon is not controlled by its own control modules. Rather, the control modules (either individually or collectively as a node) are designed to control the operation of the process.

C. No Simulation-Control Module Communication During Control Module Operation

Because Nixon is directed to simulating the operation of the control modules, Nixon fails to disclose or suggest that it would be desirable or even possible to communicate data between the simulation and control modules during operation of the control module, as required by claim 1. As copies of the control modules, Nixon's simulation modules have no reason to communicate data with the control modules from which they were created, much less while such control modules are operating.

For these reasons, it is submitted that Nixon's approach to simulating process control modules neither discloses nor suggests a process simulation module, as recited in claim 1. It is therefore respectfully submitted that Nixon fails to disclose or suggest every element of independent claim 1. It follows that claim 1, and, by implication, claims 11, 15, 16, 20, and 31-38 dependent thereon, are not anticipated by the cited reference.

V. The 35 U.S.C. §103(a) Rejections Are Traversed

Applicants respectfully traverse the rejections of claims 4, 21, 23, 24, 40 and 45 under 35 U.S.C. §103(a) as being unpatentable over Nixon in view of one of Hafemann, Berman, and Santoline. Reconsideration and withdrawal of these rejections are respectfully requested for the reasons set forth below.

A. Hafemann, Berman and Santoline Fail to Cure the Deficiencies of Nixon

Hafemann is directed to a software solution for controlling an enterprise by defining, controlling and illustrating resources and safety elements of an enterprise control system and, as a result, does not disclose or suggest a process simulation module, as recited in claim 1, much less one having the characteristics discussed above in connection with Nixon.

Berman is directed to methods of building (i.e., constructing) a control center for a plant and, thus, does not disclose process simulation modules or control modules.

Santoline discloses a simulator for simulating the operation of a process, where the process is replaced by a process model implemented by a plant model computer. Nonetheless, there is no disclosure or suggestion of a process simulation module, as recited in claim 1, much less any communication connection between a process simulation module and a control module that implements process control activities within the process plant, as also recited by claim 1.

It is clear that the prior art must make a suggestion of or provide an incentive for a claimed combination of elements to establish a prima facie case of obviousness. See, In re Oetiker, 24 U.S.P.Q.2d 1443, 1446 (Fed. Cir. 1992); Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. Pat. App. 1985). Because each of the cited references fails to disclose or provide any motivation for a process simulation module as recited in claim 1, it follows that none of these documents can render any of the claims at issue obvious. It follows that claim 4, 21, 23, 24, 40 and 45 recite patentable subject matter over the cited references.

B. Statement to Establish Common Ownership of Nixon

The present application and the Nixon reference were both, at the time the invention was made, owned by, or subject to an obligation of assignment to, Fisher-Rosemount Systems, Inc. Further evidence of such common ownership may be found via the respective assignment documents, copies of which have been recorded with the U.S. Patent and Trademark Office. In this regard, please see Reel/Frame numbers 013652/0996 (the Nixon reference) and 015129/0060 (the present application).

Pursuant to 35 U.S.C. §103(c), Applicants accordingly submit that the Nixon reference is disqualified from use in a rejection under 35 U.S.C. §103(a).

For the foregoing reasons, Applicants respectfully request withdrawal of the rejections of claims 4, 21, 23, 24, 40 and 45.

VI. Conclusion

Applicants have now made an earnest attempt to place this case in condition for immediate allowance. For the foregoing reasons and for other reasons clearly apparent, Applicants respectfully request reconsideration and allowance of claims 1-45.

The Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 13-2855 of Marshall, Gerstein & Borun LLP. In addition, if a petition for any further extension of time under 37 CFR 1.136(a) is necessary to maintain the pendency of this case and is not otherwise requested in this case, Applicants request that the Commissioner consider this paper to be a request for an appropriate extension of time and hereby authorize the Commissioner to charge the fee as set forth in 37 CFR 1.17(a) corresponding to the needed extension of time to Deposit Account No. No. 13-2855 of Marshall, Gerstein & Borun LLP. A copy of this paper is enclosed herewith.

If there are matters that can be discussed by telephone to further the prosecution of this application, Applicants respectfully request that the Examiner call their attorney at the number listed below.

Respectfully submitted,

BLEVINS, ET AL.

By: _____

G. Christopher Braidwood
Registration No.: 41,631
MARSHALL, GERSTEIN & BORUN LLP
6300 Sears Tower
233 South Wacker Drive
Chicago, Illinois 60606-6402
(312) 474-6300 (phone)
(312) 474-0448 (fax)

August 11, 2005

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings presents changes to FIG. 7B. This sheet replaces the original sheet including FIG. 7B to include previously omitted lead lines and reference numerals for elements 184 and 186.

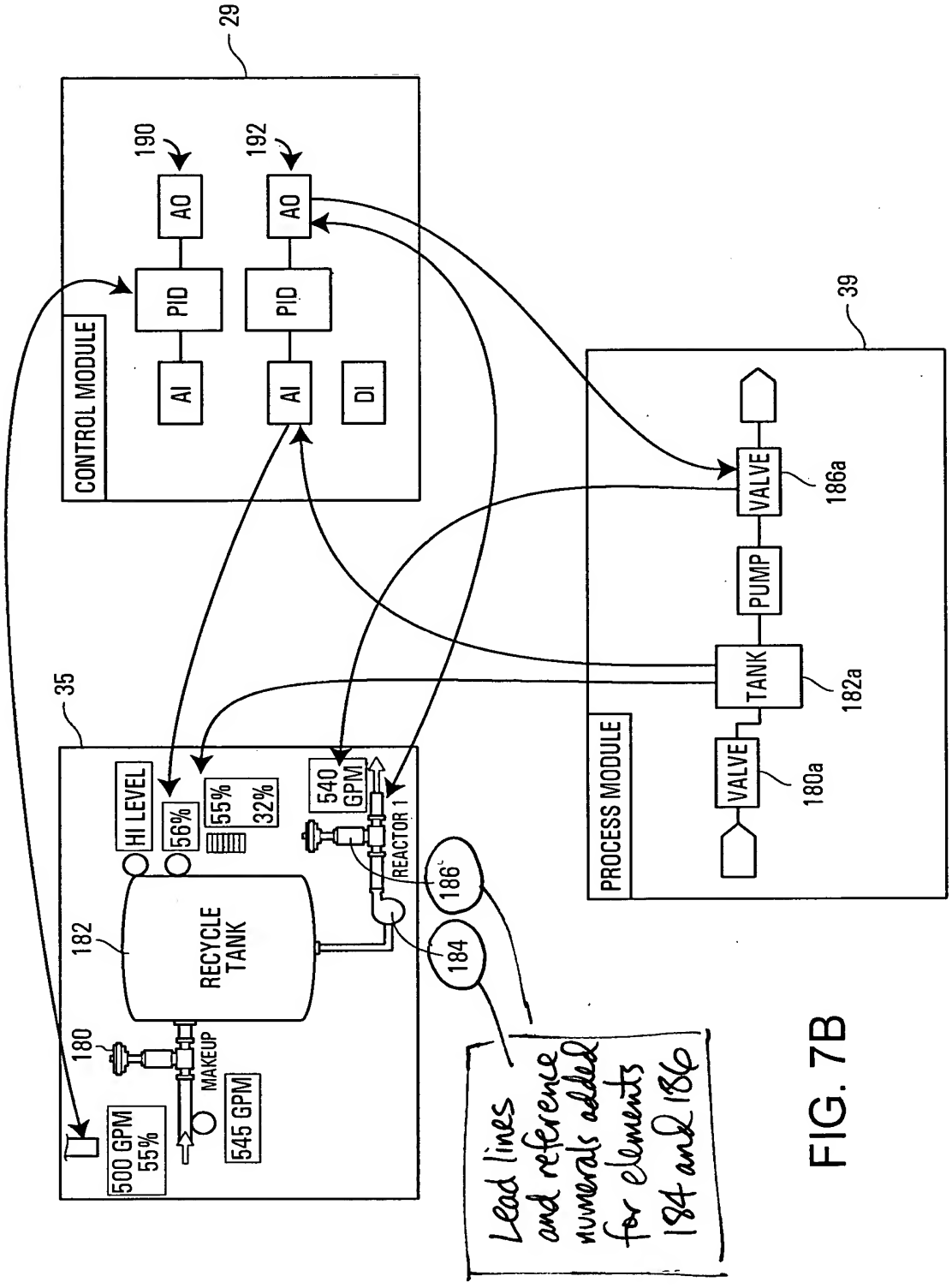

FIG. 7B